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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/602,151

06/24/2003

Douglas Anthony Able

2003-0117.01

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7590

06/29/2004

LEXMARK INTERNATIONAL, INC.
INTELLECTUAL PROPERTY LAW DEPARTMENT
740 WEST NEW CIRCLE ROAD
BLDG. 082-1
LEXINGTON, KY 40550-0999

EXAMINER

PHAM, HAI CHI

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/602,151	Applicant(s) ABLE ET AL.	
	Examiner Hai C Pham	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/24/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1:

- The following limitation "...a second period of time *starting when* said first period of time has occurred *or until* said determining that a subsequent print job is occurring so determines" (emphasis added) appears to be unclear in that the starting and ending time of the second period is not clearly defined although such second period has a finite time as disclosed by the specification. The "start and end of the second period of time" would be better defined if the above limitation is changed as follows --...a second period of time starting when said first period of time has elapsed and no new print job has occurred and ending after a second time period or until said determining that a subsequent print job is occurring so determines--. The above limitation will be considered based on the above assumption during the present examination.

Claims 2-13 are dependent form claim 1 above, and are therefore indefinite.

Appropriate correction is required.

Allowable Subject Matter

3. Claims 1-13 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action.

4. The following is an examiner's statement of reasons for allowance: claim 1 is patentable over the prior art patents and printed publications because of the specific sequential standby state of the rotational mirror and the fuser, wherein the rotation of the mirror is kept at full imaging speed while the temperature of the fuser is reduced in the first stage of the standby mode for a finite period of time when no new print job has occurred, the rotation of the mirror is then reduced and the temperature of the fuser is further reduced in the second stage of the standby mode for a finite period of time when the first stage has ended and no new print job has occurred, and the rotation of the mirror is reduced to off or to a slower speed while the temperature of the fuser is further reduced in the third stage of the standby mode until a new print job is determined. This serves to even reduce the power consumption of the printer when no new print job is determined and is not taught by the art of record alone or in combination.

The prior art of record, Tadokoro et al. (U.S. 4,589,764), discloses the control of the operation of the polygon mirror and the fusing unit after the completion of a print job, wherein the polygon mirror is kept at the imaging speed and the fusing unit at the fusing operation temperature after the completion of the printing operation for a preliminary time, and wherein the rotational speed of the polygon mirror and the temperature of the fusing unit are respectively reduced after the elapse of the preliminary time waiting for

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the next operation. Tadakoro et al. thus fails to teach the claimed sequential stages of the standby mode.

The prior art of record, Takahashi et al. (U.S. 5,867,748), discloses the control of the rotational speed of the polygon mirror after the termination of a print job where the rotational speed is reduced to a lower speed as compared to the operational speed for a first period of time followed by a further reduction of the rotational speed as the polygon mirror is kept in the resting state when no new print job is determined. Takahashi et al. fails to teach the concurrent control of the fusing unit as well as the preliminary controlled speed of the polygon mirror right after the termination of the print job.

The prior art of record, Yoshida et al. (U.S. 5,321,479), discloses the heating control sequence for the image fixing unit wherein the temperature of the fixing unit is first reduced to a standby temperature lower than that of the operational temperature for a first predetermined period of time when there is no new print job being determined after the termination of the printing operation, the temperature of the fixing unit is further reduced to an energy-saving temperature lower than that of the standby temperature when the first predetermined period of time has elapsed and when there is no new print job being determined. Yoshida et al. fails to teach the third stage of the standby mode and is silent regarding the operation of the polygon mirror during the standby mode.

The prior art of record, Sugiura (U.S. 5,832,332), discloses the heating control sequence for the image fixing unit wherein the fixing heater is kept at a predetermined lower temperature after a recording operation ends and wherein if the next recording operation is not started within the predetermined length of time, the fixing heater is

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turned off. Sugiura fails to teach the sequential periods of time during the standby mode as claimed for the fixing unit and is silent with regard to the rotational speed of the polygon mirror.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM
PRIMARY EXAMINER

June 25, 2004